Homework/Extension
Step 2: Factors

National Curriculum Objectives:

Mathematics Year 5: (5C5a) Identify multiples and factors, including finding all factor pairs of a number, and common factors of to numbers

Differentiation:

Questions 1, 4 and 7 (Varied Fluency)
Developing Identify pairs of factors using knowledge of the 2, 3, 5 and 10 times table. Factor pairs can be found vertically or horizontally.
Expected Identify pairs of factors using knowledge of times table facts up to 12 x 12. Factor pairs can be found vertically or horizontally.
Greater Depth Identify pairs of factors using knowledge of known times table facts to 12 x 12 and beyond. Factor pairs can be found vertically, horizontally or diagonally.

Questions 2, 5 and 8 (Varied Fluency)
Developing Using knowledge of the 2, 3, 5 and 10 times table, travel across a grid by finding factors of a given number.
Expected Using knowledge of times table facts up to 12 x 12, travel across a grid by finding factors of a given number. Includes factors up to 12.
Greater Depth Using knowledge of known times table facts to 12 x 12 and beyond, travel across a grid by finding factors of an unidentified number.

Questions 3, 6 and 9 (Reasoning and Problem Solving)
Developing Spot the odd one out when using arrays to multiply factors. Requires knowledge of the 2, 3, 5 and 10 times table.
Expected Spot the odd one out when using arrays to multiply factors. Requires knowledge of times table facts up to 12 x 12.
Greater Depth Spot the odd one out when multiplying factors. Requires knowledge of known times table facts to 12 x 12 and beyond.

More Year 5 Multiplication and Division resources.

Did you like this resource? Don't forget to review it on our website.

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Homework/Extension – Factors – Teaching Information

Factors

1. Find and circle pairs of factors on the grids below. Factor pairs are adjacent to each other and can be found vertically or horizontally.

Factors of 20

7	1	20
5	3	9
4	10	2

Factors of 12

1	5	8
12	6	2
4	3	10

VF
HW/Ext

2. Travel from the start to the finish by colouring the factors of 18.

Start		
1	10	5
18	2	9
4	7	3
8	11	6
		Finish

VF
HW/Ext

3. Spot the odd one out and explain why.

A.

B.

C.
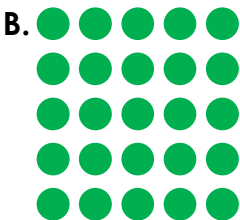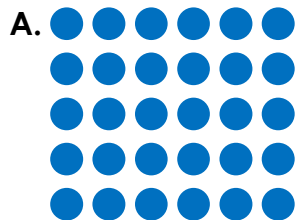
RPS
HW/Ext

Factors

4. Find and circle pairs of factors on the grids below. Factor pairs are adjacent to each other and can be found vertically or horizontally.

Factors of 16

3	9	10	4
2	8	5	4
5	11	16	7
12	3	1	6

Factors of 40

12	11	6	1
5	9	20	40
10	4	8	7
2	15	5	6

VF
HW/Ext

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5. Travel from the start to the finish by colouring the factors of 24.

Start			
2	6	7	11
21	12	1	20
10	9	3	9
23	16	4	8
18	5	22	24
			Finish

VF
HW/Ext

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6. Spot the odd one out and explain why.

A.

B.

C.

D.

RPS
HW/Ext

Factors

7. Find and circle pairs of factors on the grids below. Factor pairs are adjacent to each other and can be found vertically, horizontally or diagonally.

Factors of 28

3	9	6	1
11	2	12	28
8	7	14	5
4	5	10	6

Factors of 30

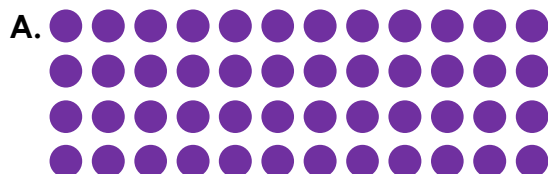|			
2	4	8	5
11	15	3	6
7	10	12	8
4	9	1	30

GD

8. Find a route from start to finish that travels through factors of the same two-digit number. Clue: The digits of this number total 6 when added together.

Start			
6	21	9	5
10	7	4	8
1	2	12	11
9	14	42	3
4	5	10	1
			Finish

GD

9. Spot the odd one out and explain why.

A.
● ● ● ● ● ● ● ● ● ● ●
● ● ● ● ● ● ● ● ● ● ●
● ● ● ● ● ● ● ● ● ● ●
● ● ● ● ● ● ● ● ● ● ●

B. 6 x 8

C. two multiplied by twenty-four

D. three lots of fifteen

GD

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Homework/Extension – Factors – Year 5 Greater Depth

Homework/Extension
Factors

Developing
1. **20 = (1 and 20), (5 and 4), (10 and 2)**
12 = (1 and 12), (6 and 2), (4 and 3)
2. The factors from start to finish are: 1, 18, 2, 9, 3 and 6
3. B is the odd one out because the others are multiplying factors of 30. B is multiplying factors of 25.

Expected
4. **16 = (1 and 16), (2 and 8), (4 and 4)**
40 = (1 and 40), (4 and 10), (5 and 8)
5. The factors from start to finish are: 2, 6, 12, 1, 3, 4, 8 and 24
6. B is the odd one out because the others are multiplying factors of 36. B is multiplying factors of 33.

Greater Depth
7. **28 = (1 and 28), (2 and 14), (4 and 7)**
30 = (1 and 30), (2 and 15), (3 and 10), (5 and 6)
8. The number is 42 and the factors from start to finish are: 6, 21, 7, 2, 14, 42, 3 and 1
9. D is the odd one out because the others are multiplying factors of 48. D is multiplying factors of 45.

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Homework/Extension – Factors ANSWERS